

LISTING OF CLAIMS

1. (Original) An arrangement enabling a liquid to flow evenly around a surface of a sample, said arrangement comprising:

a flow chamber having said liquid flowing therethrough,

a sample located at least in part in said flow chamber and rotatable about an axis of rotation by means of a rotary drive,

inflow and outflow pipes each extending to opposite ends of the flow chamber from inflow and outflow containers, respectively,

an inflow tube terminating in the inflow container,

an outflow tube beginning in the outflow container,

a flow generator, and

filters arranged in the inflow and/or outflow container or in the inflow and outflow pipes, respectively, and having the liquid flowing therethrough,

wherein the inflow and outflow pipes extend in opposite ends of the flow chamber and the outflow tube begins in the outflow container.

2. (Currently Amended) An arrangement according to claim 1, An arrangement enabling a liquid to flow evenly around a surface of a sample, said arrangement comprising:

a flow chamber having said liquid flowing therethrough,

a sample located at least in part in said flow chamber and rotatable about an axis of rotation by means of a rotary drive,

inflow and outflow pipes each extending to opposite ends of the flow chamber from inflow and outflow containers, respectively,

an inflow tube terminating in the inflow container,

an outflow tube beginning in the outflow container,

a flow generator, and

filters arranged in the inflow and/or outflow container or in the inflow and outflow pipes, respectively, and having the liquid flowing therethrough,

wherein the inflow and outflow pipes extend in opposite ends of the flow chamber and the outflow tube begins in the outflow container and,

wherein the filters include a plurality of filter pores having a size and a number set to be varying across the overall filter area such that a pressure differential between the inflow/outflow pipes arranged at different distances from the inflow/outflow tube, which causes non-uniform flow through said pipes, is compensated by different overall pore areas associated with the individual pipes.

3. (Currently Amended) An arrangement according to claim 1-2, for electro-depositing or electro-removing material on or from the surface of the sample, comprising an electrode in the flow chamber, wherein the liquid is an electrolyte and wherein the sample and the electrode are connected to a pulsating or constant current source.

4. (Currently Amended) ~~An arrangement according to claim 3, An arrangement enabling a liquid to flow evenly around a surface of a sample and~~ for electro-depositing or electro-removing material on or from the surface of the sample, wherein said arrangement comprising:

a the flow chamber has having said liquid flowing therethrough and two planar confining walls arranged parallel to the direction of flow and having a first and second recess, respectively,

an electrode in the flow chamber,

a the sample has located at least in part in said flow chamber and rotatable about an axis of rotation by means of a rotary drive and having a substantially planar surface having said axis of rotation arranged perpendicular thereto,

inflow and outflow pipes each extending to opposite ends of the flow chamber from inflow and outflow containers, respectively,

an inflow tube terminating in the inflow container,

an outflow tube beginning in the outflow container,

a flow generator, and

filters arranged in the inflow and/or outflow container or in the inflow and outflow pipes, respectively, and having the liquid flowing therethrough,

wherein the inflow and outflow pipes extend in opposite ends of the flow chamber and the outflow tube begins in the outflow container,

wherein the liquid is an electrolyte and the sample and the electrode are connected to a pulsating or constant current source, and

the electrode covers the second recess with a planar surface and defines a plane with the associated confining wall.

5. (Original) An arrangement according to claim 4, wherein the electrode has a grid basket of electrochemically inert material that is filled with the material to be deposited in granular form and has a planar surface containing holes.

6. (Original) An arrangement according to claim 4, wherein the electrode consists of a metal body having a planar surface and coated with platinum or another noble metal.

7. (Currently Amended) An arrangement according to claim 1, An arrangement enabling a liquid to flow evenly around a surface of a sample, said arrangement comprising:

a flow chamber having said liquid flowing therethrough,
a sample located at least in part in said flow chamber and rotatable about
an axis of rotation by means of a rotary drive,
inflow and outflow pipes each extending to opposite ends of the flow
chamber from inflow and outflow containers, respectively,
an inflow tube terminating in the inflow container,
an outflow tube beginning in the outflow container,
a flow generator, and
filters arranged in the inflow and/or outflow container or in the inflow
and outflow pipes, respectively, and having the liquid flowing therethrough,
wherein the inflow and outflow pipes extend in opposite ends of the flow
chamber and the outflow tube begins in the outflow container and the inflow and/or
outflow tube extends via a throttle valve into a supply container filled with liquid, said supply
container having means for filtering as well as for regulating the temperature, the pH value,
the filling level and optionally also the ion concentration of the liquid.

8. (Currently Amended) An arrangement according to claim 5 7, wherein
[said material for electro-depositing is a nickel/iron alloy and said sample is a silicon or
ceramic wafer, whereby a layer of the alloy has a composition and an intrinsic mechanical
stress that is homogeneous across the wafer.

9. (Currently Amended) An arrangement according to claim 5 7,
wherein said material for electro-depositing is an electrophoretic photoresist material.

10. (Currently Amended) An arrangement according to claim 4 7,
wherein said liquid is deposited on the surface of the sample without the use of an electrode.

11. (Currently Amended) An arrangement according to claim + 7, wherein said liquid is an etching solution for removing material from the surface of the sample.

12. (Currently Amended) An arrangement enabling a liquid to flow evenly around a surface of a sample, said arrangement comprising a flow chamber profiled for allowing liquid to flow therethrough, a rotary drive mechanism having a sample mounting surface profiled relative to said flow chamber whereby a sample can be located at least in part in said flow chamber and rotatable about an axis of rotation by said rotary drive mechanism, an inflow manifold and an ~~out-flow outflow~~ manifold positioned on opposite ends of said flow chamber, each manifold having flow tubes extending from said respective manifold and into said flow chamber, said manifolds and said flow tubes defining a laminar flow pattern through said flow chamber.

13. (Original) The arrangement of claim 12, further comprising filters arranged in the inflow and/or outflow container or in the inflow and outflow pipes, respectively, and having the liquid flowing therethrough.

14. (Currently Amended) ~~An arrangement according to claim 12, An arrangement enabling a liquid to flow evenly around a surface of a sample, said arrangement comprising a flow chamber profiled for allowing liquid to flow therethrough, a rotary drive mechanism having a sample mounting surface profiled relative to said flow chamber whereby a sample can be located at least in part in said flow chamber and rotatable about an axis of rotation by said rotary drive mechanism, an inflow manifold and an outflow manifold positioned on opposite ends of said flow chamber, each manifold having flow tubes extending from said respective manifold and into said flow chamber, said manifolds and said flow tubes defining a laminar flow pattern through said flow chamber and~~ wherein the size and the number of the filter pores is set to be varying across the overall filter area such that a pressure differential between the inflow/outflow pipes arranged at different distances from the inflow/outflow tube, which

causes non-uniform flow through said pipes, is compensated by different overall pore areas associated with the individual pipes.

15. (Currently Amended) An arrangement according to claim 12 14 for electro-depositing or electro-removing material on or from the surface of the sample, comprising an electrode in the flow chamber, wherein the liquid is an electrolyte and wherein the sample and the electrode are connected to a pulsating or constant current source.

16. (Currently Amended) An arrangement according to claim 12 An arrangement enabling a liquid to flow evenly around a surface of a sample for electro-depositing or electro-removing material on or from the surface of the sample, wherein said arrangement comprising:

a the flow chamber has profiled for allowing liquid to flow therethrough and having two planar confining walls arranged parallel to the direction of flow and having a first and a second recess, respectively,

a rotary drive mechanism having a sample mounting surface profiled relative to said flow chamber whereby a sample can be located at least in part in said flow chamber and rotatable about an axis of rotation by said rotary drive mechanism and the sample has having a substantially planar surface having said axis of rotation arranged perpendicularly thereto,

an inflow manifold and an outflow manifold positioned on opposite ends of said flow chamber, each manifold having flow tubes extending from said respective manifold and into said flow chamber, said manifolds and said flow tubes defining a laminar flow pattern through said flow chamber,

wherein the sample covers the first recess and said planar surface defines a plane with the associated confining wall, and

the electrode covers the second recess with a planar surface and defines a plane with the associated confining wall.

17. (Currently Amended) An arrangement according to claim 42—14, wherein the electrode has a grid basket of electrochemically inert material that is filled with the material to be deposited in granular form and has a planar surface containing holes.

18. (Currently Amended) An arrangement according to claim 42, 14, wherein the electrode consists of a metal body having a planar surface and coated with platinum or another noble metal.